CITY OF SAN ANTONIO
METROPOLITAN HEALTH DISTRICT

COVID-19 Monthly Epidemiological Report
October 2021

*Unless otherwise indicated, data for analyses in this report were extracted from Texas Health Trace on **11/12/2021** and include cases with event dates† through **10/31/2021**. Results are subject to change.*

Key Takeaways

New Cases & Positivity Rate

- In October, there was a 63% decline in new cases: 26,414 in September to 10,890 new cases in October.
- In October, there was a 54% decline in positivity rate: 5.4% in September to 2.5% in October.

Hospitalizations and Deaths

- During October, COVID-19 related hospitalizations declined from 4,174 in September to 1,379 (69% decline).
- During October, COVID-19 related deaths declined from 202 deaths in September to 92 (60% decline).

Cases and Age

- In October, similar to September, age group 10-19 years made up the largest proportion of COVID-19 cases (18.1% in October versus 21.1% in September).
- Age group 0-9 made up the second largest proportion of cases at 17.5% in October 2021, and an overall 8.4% of the total COVID-19 cases. The same age group made up 15.3% of cases in September.
- The 0-19 age group has accounted for 4% of hospitalizations over the entire pandemic — approximately 9% during the month of October, and 6% during the month of September.

I. Current Status and Overview of COVID-19 in Bexar County

During the **five calendar weeks** that include October, Bexar County reported* 10,890 new cases along with 1,379 new COVID-19 associated hospitalizations and 92 deaths — a steady decrease throughout the month in new cases, hospitalizations, and test positivity rate.

The month of October saw a **63% decline in new cases** compared to September. Similarly, the number of monthly **new hospitalizations declined by 69%. Deaths**, a lagging indicator with some fluctuation during October, **also decreased overall by 60%**. **Average test positivity declined by 54%,** from 5.4% in September to 2.5% in October.

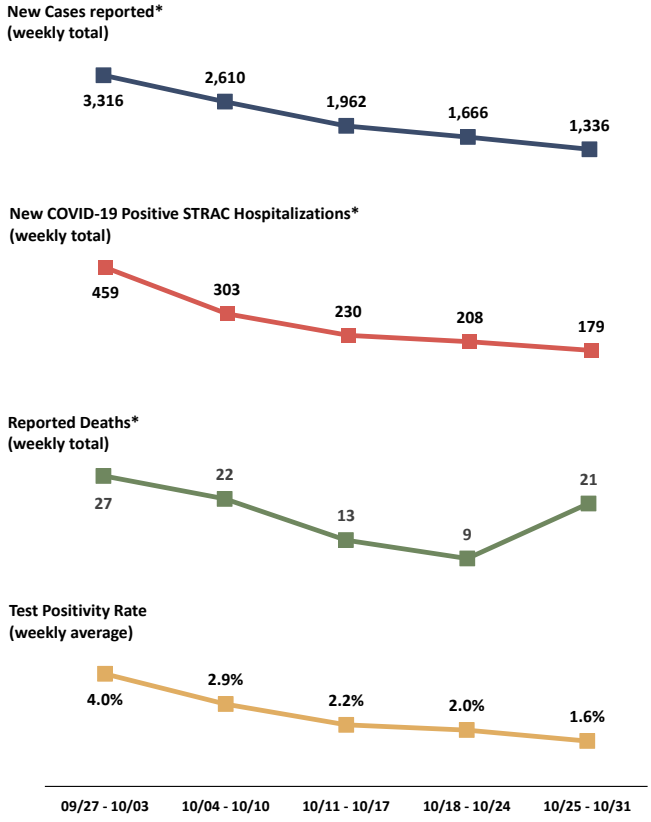
Weekly new reported cases decreased steadily during October. By the last week of the month, new reported cases had declined by 60% compared to the first week.

Weekly new hospital admissions also declined each week, with a total reduction of 61% from the first to the last week.

Weekly reported deaths declined by 67% over the first four weeks, but then rebounded. The overall reduction from first week to last week was 22%.

Weekly test positivity declined 60% from first to last week of October, and remained at or below 4.0%. Total tests declined by 16% from first to last week.

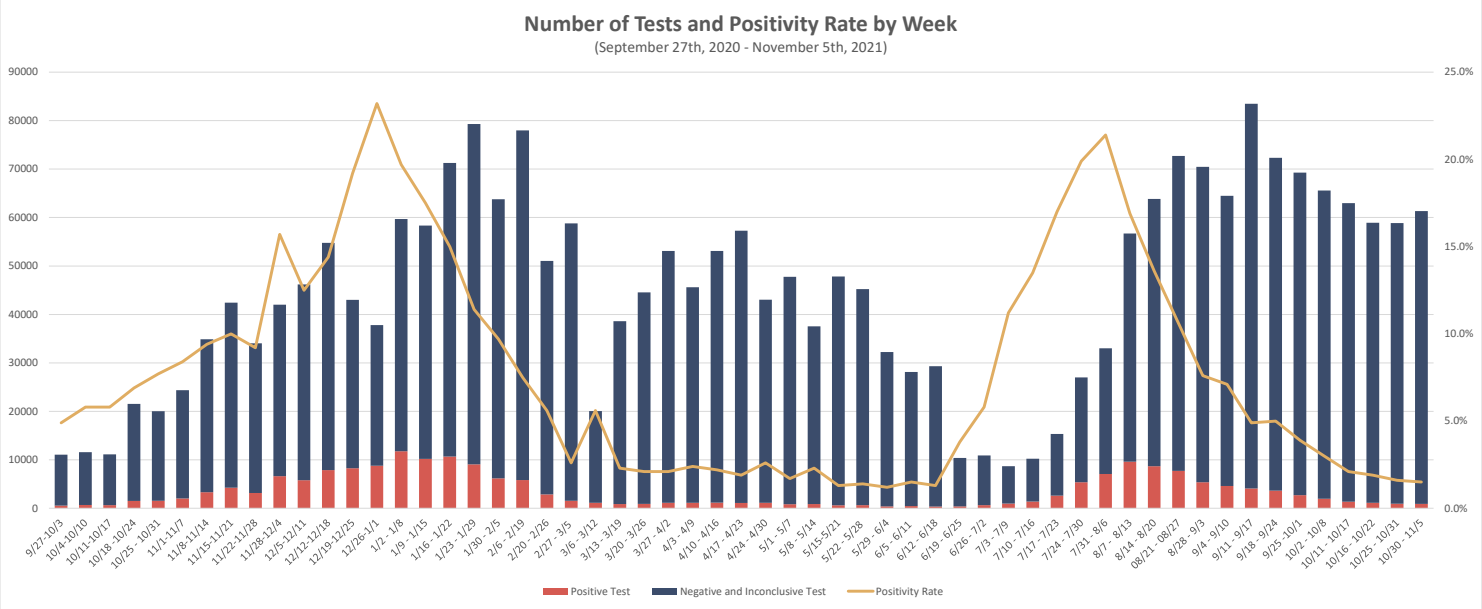
Weekly Indicator Trends (Mon-Sun)



*Reported cases and deaths may have occurred anytime during the previous 14 days. Delayed reports of backlogged cases and deaths are not included in weekly totals.

II. Testing & Positivity Rate

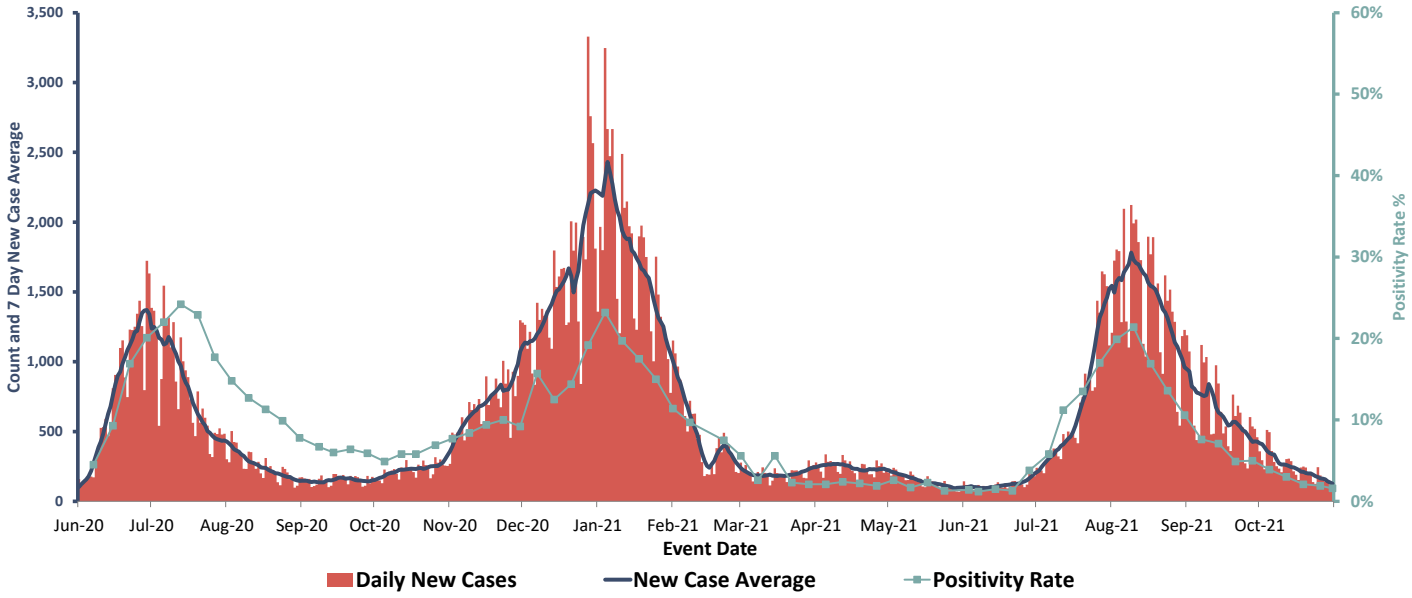
Bexar County's COVID-19 weekly test positivity rate decreased in October, with a **low of 1.5%** during the second-to-last week of the month — the lowest positivity rate since the end of June 2021. About 280,000 tests were processed during the month of October '21. The month of October had a 16% decrease in tests compared to the month of September.
Source: Aggregate Lab Report of labs conducting COVID-19 testing



III. Trends & Demographic Characteristics among COVID-19 Cases

As in September '21, **October '21 continued to see a decrease of COVID-19 cases in the community**. Cases decreased to 94 daily cases at the end of October, compared to 1,189 daily cases seen during the beginning of September 2021. Daily cases also dropped below 100 towards the end of October for the first time since the beginning of June 2021.

Bexar County COVID-19 Cases by Event Date* and Positivity Rate



Average shown is a centered moving average calculated as t0 +/- 3 days
**Event date refers to either illness onset date (for symptomatic cases) or test collection date (for asymptomatic cases or when onset date not available). This differs from Reported Date.*

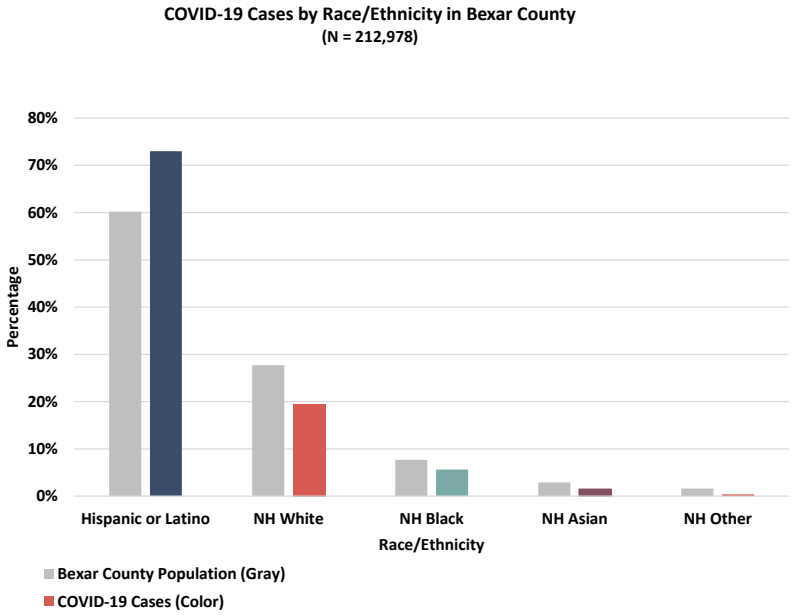
III. A. Race/Ethnicity Distribution of Cases

Among cases for whom race/ethnicity data are available (66%), Hispanic individuals continue to constitute the majority of COVID-19 cases in Bexar County.

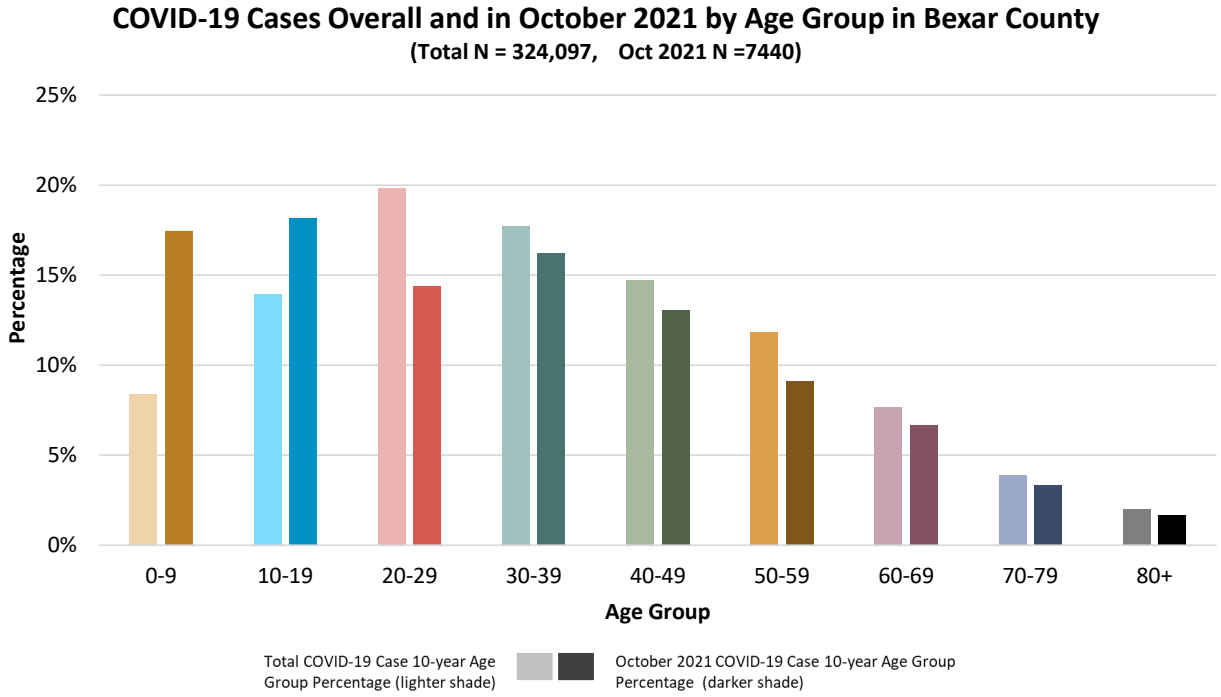
Hispanics also make up a larger portion of cases when compared to their general population.

Notes:

1. Data on race and/or ethnicity are currently unavailable for about 34% of cases.
2. The number of Bexar County residents is the ACS (5-yr) 2019 population estimate.
3. NH = Non-Hispanic

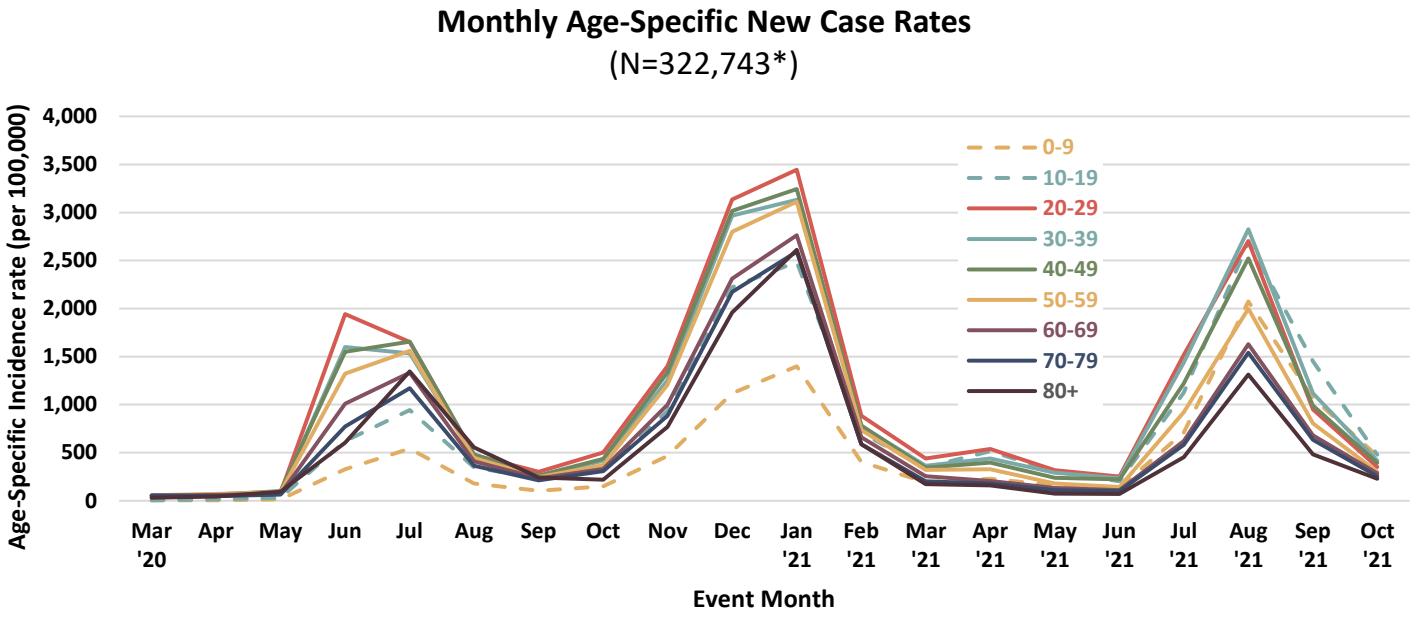


III. B. Age and Gender Distribution of Cases



In October 2021, age group 10-19 years made up the largest proportion of COVID-19 cases, at about **1 in 4.5 of all cases (18.1%)**, followed by cases aged 0-9 years (17.5%). During the month of October 2021, cases in age groups 0-9 and 10-19 made up a higher percentage of cases than the overall pandemic average. The average age of cases in October 2021 (31.5 years) is lower than the average age of all COVID-19 cases during the pandemic (35.9 years). The percentage of cases in age groups 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80+ are lower in October 2021 than overall during entirety of the COVID-19 pandemic. Notably, COVID -19 cases in age group 0-9 made up 17.5% of October 2021 cases in comparison to the overall average of 8.4% of total COVID-19 cases, and cases aged 10-19 years made up 18.1% of October 2021 cases but made up 14.0% of total COVID-19 cases.

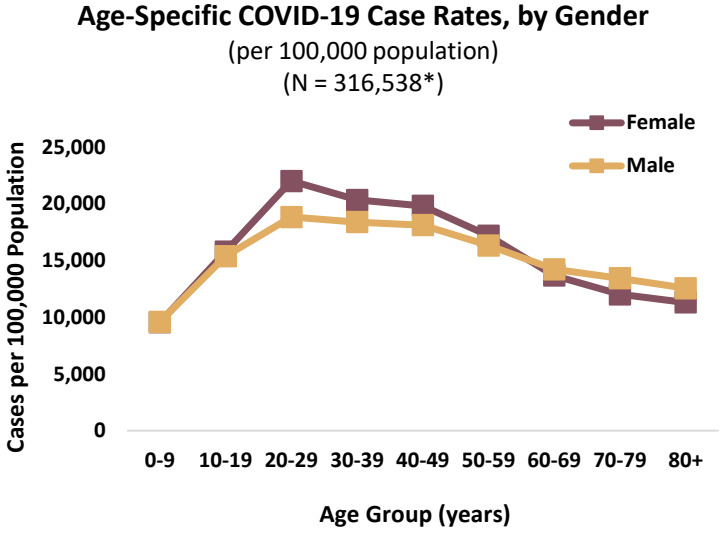
III. C. Age and Gender Distribution of Cases



Age-specific case rates† continued to decrease between September '21 and October '21. **In October '21**, the highest rates occurred among children and teens age **10-19** (**sage dashes**), followed in order by age groups **0-9 years** (**beige dashes**), **30-39** (**sage line**), **40-49** (**dark green**), **20-29 years** (**red**), **50-59** (**solid beige**), **60-69** (**dark maroon**), **70-79** (**dark blue**), with the lowest rate among those age **80+ years** of age (**black**). Similar to September, **the 10-19 age group continued have the highest age-specific case rates** among all age groups throughout October.

Over the course of the pandemic, **17% of all residents are known to have had COVID-19**. Case rates continued to decrease for all age groups from September to October, with the largest declines among 10-19 years old, despite having highest case-rates during October.

*Excludes 194 cases with age not available plus 6 cases diagnosed in February 2020 (less than 0.1%).



*Excludes 7,772 cases (2%) for whom age and/or gender was not available.

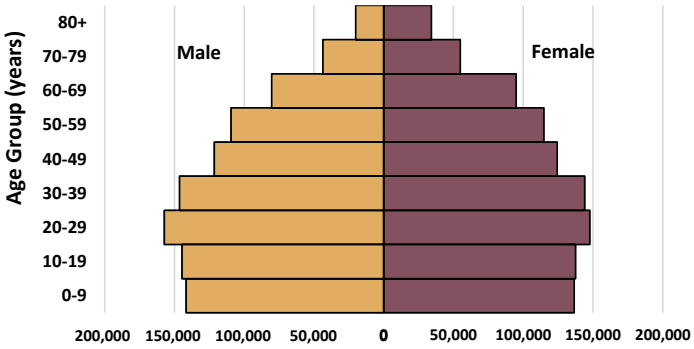
The highest age-specific rates† of COVID-19 have been among young adults and women throughout the pandemic.

Through the end of October '21, the age-adjusted‡ COVID-19 case rates were 16,636 cases per 100,000 females and 15,772 cases per 100,000 males (females 5% higher than males). There were approximately 500 cases per 100,000 for each gender in October alone. The overall age-adjusted case rate for the County is now 16,209 cases per 100,000 population, all cases combined.

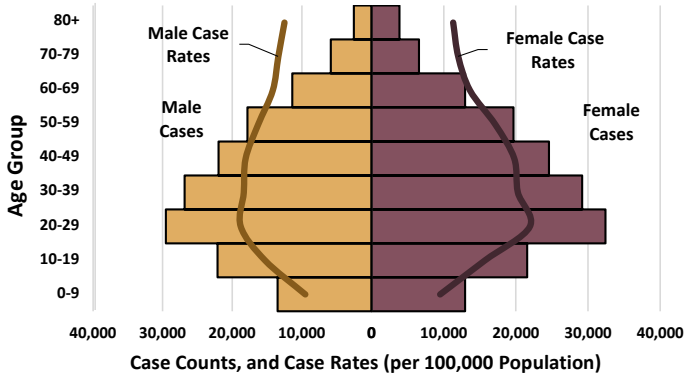
†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.
‡Age-adjusted rates are weighted using the US Standard Population 2000.

IV. The Extent of COVID-19 in the Bexar County Population

Distribution of Bexar County Residents, by Gender and Age Group



Distribution of COVID-19 Cases by Gender and Age Group, with Respective Case Rates per 100,000*
(N = 315,231 Cases*)



*Excludes 7,723 cases (2.4%) for whom age and/or gender was not available.

Through the end of October '21, **a total of 322,954 Bexar County residents are known to have had COVID-19**. **October '21 added approximately 7,443 cases (2.3% of the total to date).**

Overall, **16.5% (1 in 6.0) of Bexar County residents are known to have had COVID-19:** 17 % of female residents, and 16% of males. The overall age-adjusted case rate is 16,490 cases per 100,000 residents. The female rate continues to be 6% greater than the male rate.

Age-specific case rates† per 100,000 Bexar County residents are shown by the curved lines superimposed on the case pyramid for each age group, by gender (also shown on previous page). **Young adults 20-29 years** comprise the age group with the highest case numbers to date (N=63,961). Similarly, cumulative case rates are also highest in this age group (20,975 cases per 100,000 persons). By gender, 22% of females and 19% of males in this age group are known to have had COVID-19 since the start of the pandemic.

The oldest age group, **ages 80+ years**, has experienced the fewest cases to date (N=6,505). Case rates for this age group are now 11,996 per 100,000 persons. By gender, 11% of females and 13% of males in this age group are known to have had COVID-19.

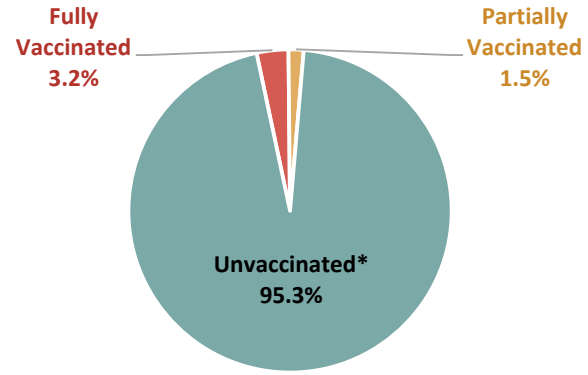
Among children below the age of 10 years, cumulative case totals are now 27,087. Case rates are about 9,500 cases per 100,000 population (9.5%) for each gender. Young people ages 10-19 years have case numbers and rates intermediate between young children and young adults, with 45,017 cases and a case rate of 15,968 per 100,000 (16% of females and 15% of males).

The month of October added 3.1% to the cumulative age-adjusted case rate‡. This increase was greatest among children below the age of 10 years (7%), second greatest in age group 10-19 (4%), least in age group 80+ years (2%), and 2% to 3% for all other age groups.

†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.
‡Age-adjusted rates use age-specific rates weighted according to the US Standard Population 2000.

Of the 183,121 cases with Event Date from January 1st, 2021 through the end of October 2021, **at least 4.7% had received some vaccination[1,2]: at least 5,823 (3.2%) were fully vaccinated (breakthrough cases)**, and at least 2,760 (**1.5%) were partially vaccinated. Known breakthrough cases increased from 0.01% of all cases in January to 6% in September and 15% in October**.

All COVID-19 Cases by Vaccination Status, since Jan 01, 2021 (N=183,121)

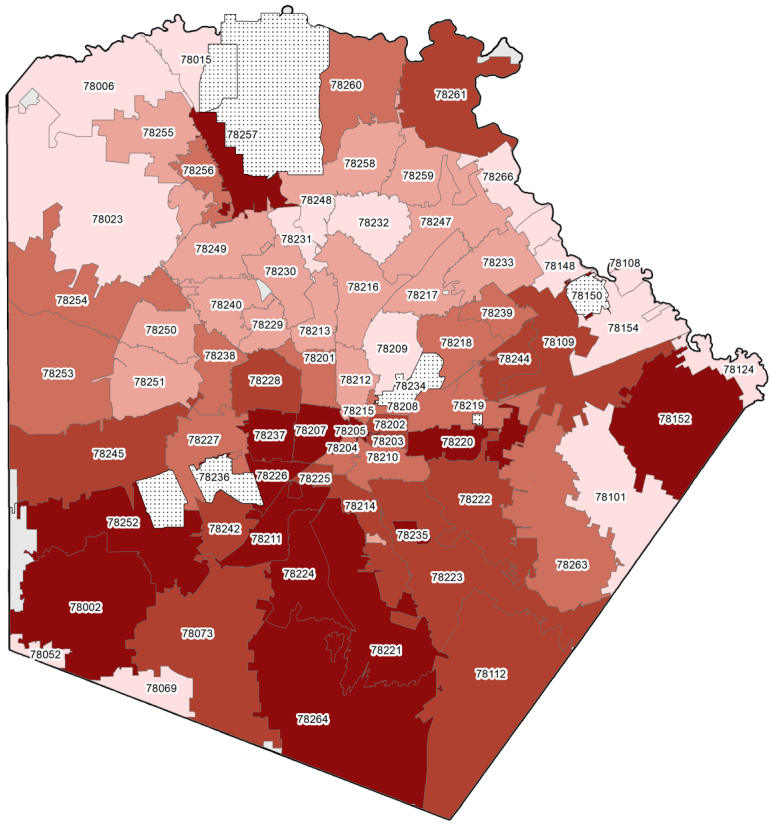


Notes:

*Vaccination data were incomplete for 58% of cases at time of analysis (early 2021 and Summer '21 surge). Therefore, percentages vaccinated, whether fully or partially (and breakthrough cases) are likely to be underestimates and biased towards those cases hospitalized or deceased (for whom vaccination data were most complete). Together with known ascertainment biases, the data suggest the percent fully vaccinated (breakthrough cases) may be approximately 6-8%. Percent breakthrough cases increased as the year progressed.

[1] Analyses of vaccination data are based upon data available from COVID-19 Case Investigation System database at the time of analysis.
[2] A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.

COVID-19 Case Rate per 100,000 Population

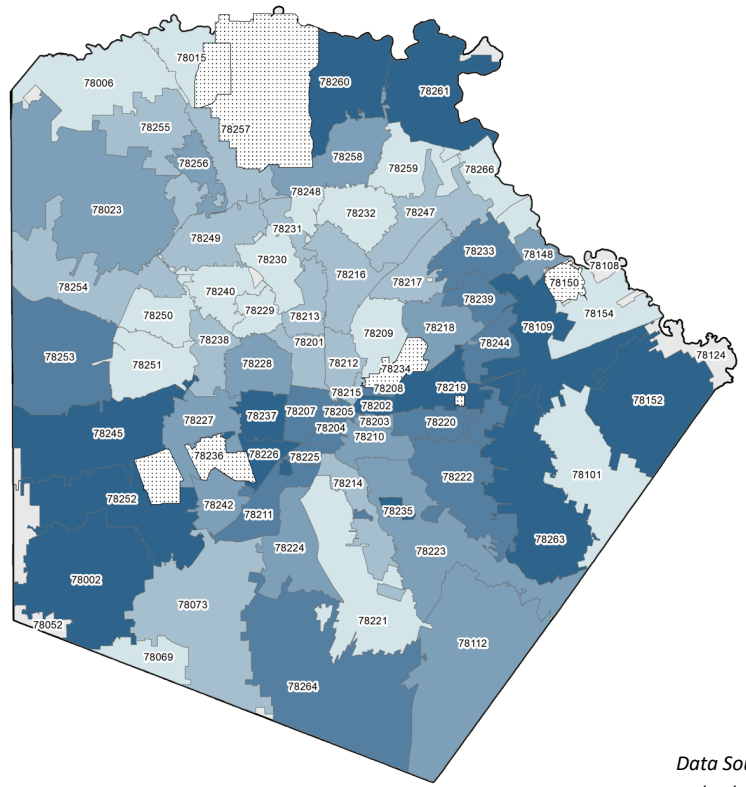


The **geographic distribution of total COVID-19 case rate by zip code continues to show the highest rates of infection have generally been in the southern portion of Bexar County.** The overall COVID-19 case rates range from 93 per 100,000 population to 97,297 per 100,000 population.

COVID-19 Case Rate per 100,000 Population

- 93 - 11,478
- 11,479 - 15,167
- 15,168 - 18,142
- 18,143 - 20,176
- 20,177 - 97,297
- Suppressed due to counts <5
- Military Bases

October 2021 COVID-19 Case Rate per 100,000 Population

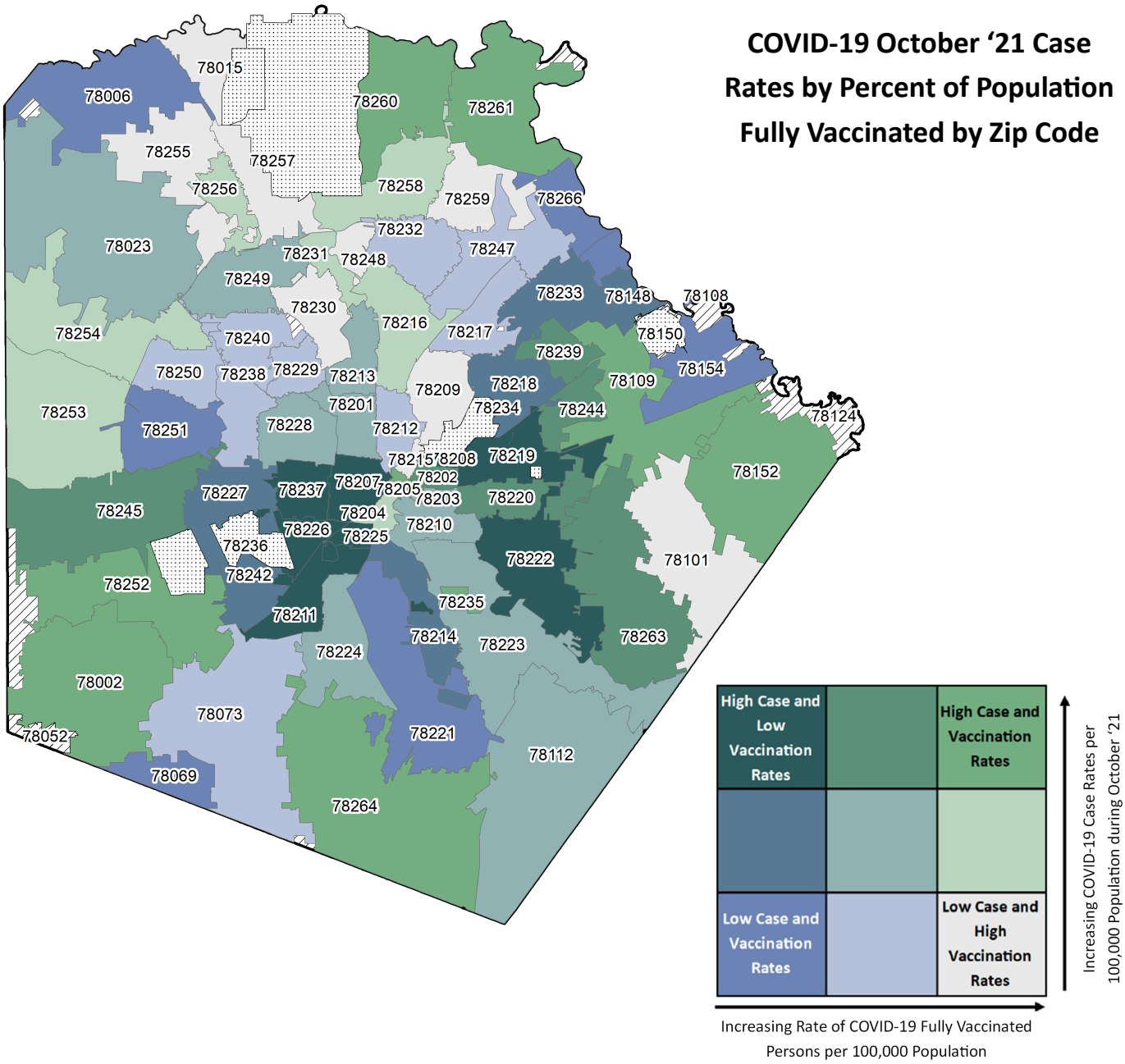


For the month of October 2021, the highest rates of new COVID-19 infections occurred in the far northeastern, eastern, and western portions of Bexar County. **New monthly case rates ranged from 28 cases per 100,000 population to 745 cases per 100,000 population during the month of October 2021.**

October 2021 Case Rate per 100,000 Population

- 28 - 299
- 300 - 343
- 344 - 419
- 420 - 499
- 500 - 745
- Suppressed due to counts <5
- Military Bases

Data Source: SAMHD COVID-19 case data through 11/19/2021, event dates through 10/31/2021; U.S. Census, ACS 2019 5-year Population Estimates, Table S0101



This map shows the geographic distribution by zip code of COVID-19 case rates per 100,000 population during the month of October 2021 (based on Event Date) and the cumulative rate of COVID-19 fully vaccinated persons per 100,000 population. Both rates are divided into lowest, middle, and highest rate thirds.

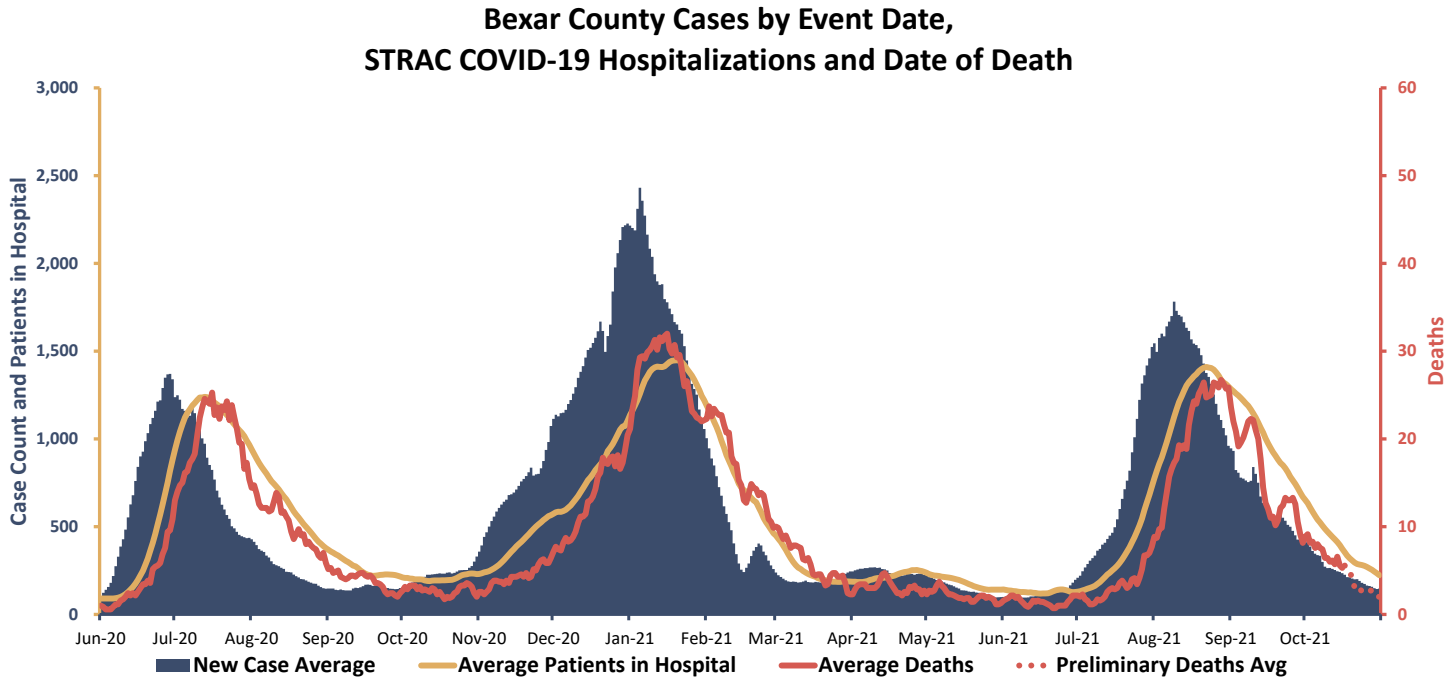
Zip codes shaded dark teal indicate they are in the highest third of new COVID-19 case rates, as well as in the lowest third of rates for fully vaccinated persons. **Zip codes with the lowest rates of fully vaccinated persons and the highest rates of October COVID-19 cases tended to be on the southeast and southwest sides of San Antonio**. Conversely, those zip codes shaded in solids grey indicate they are in the lowest third of new COVID-10 case rates for the month, and the highest third for case rates of fully vaccinated persons. **Zip codes with the highest rates of fully vaccinated persons and the lowest rates of October COVID-19 cases tended to be in northern San Antonio and in the far northern portions of Bexar County**.

Data Source: SAMHD COVID-19 Database, as of 08/09/2021; U.S. Census Bureau, ACS 2019 5-Year Estimates, Table S1701

V. Hospitalizations and Deaths among COVID-19 Cases

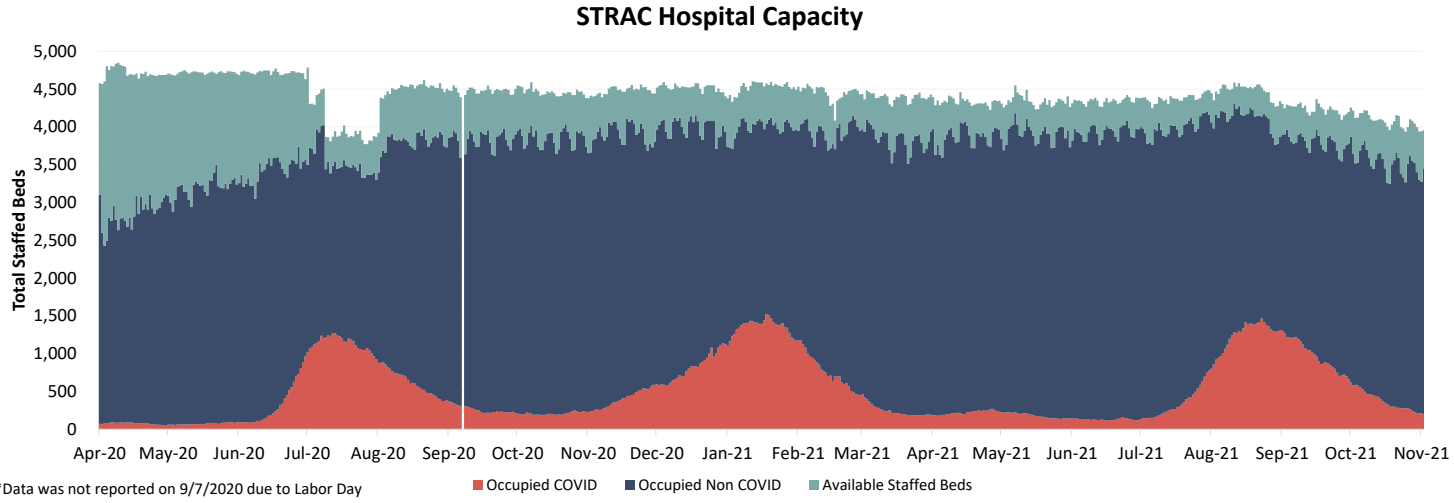
October 2021 demonstrated a decrease COVID-19 cases, hospitalizations, and deaths. The new case average at the end of October decreased to 147 cases per day and hospitalizations came down to 212 average patients in local hospitals per day. Average deaths have also come down to about 5 per day in mid-October.

Note: The death data for the last two weeks of September are considered preliminary as death certificates make their way to Metro Health for confirmation.



Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 11/12/2021
Note: Average shown is a centered moving average calculated as t0 +/- 3 days

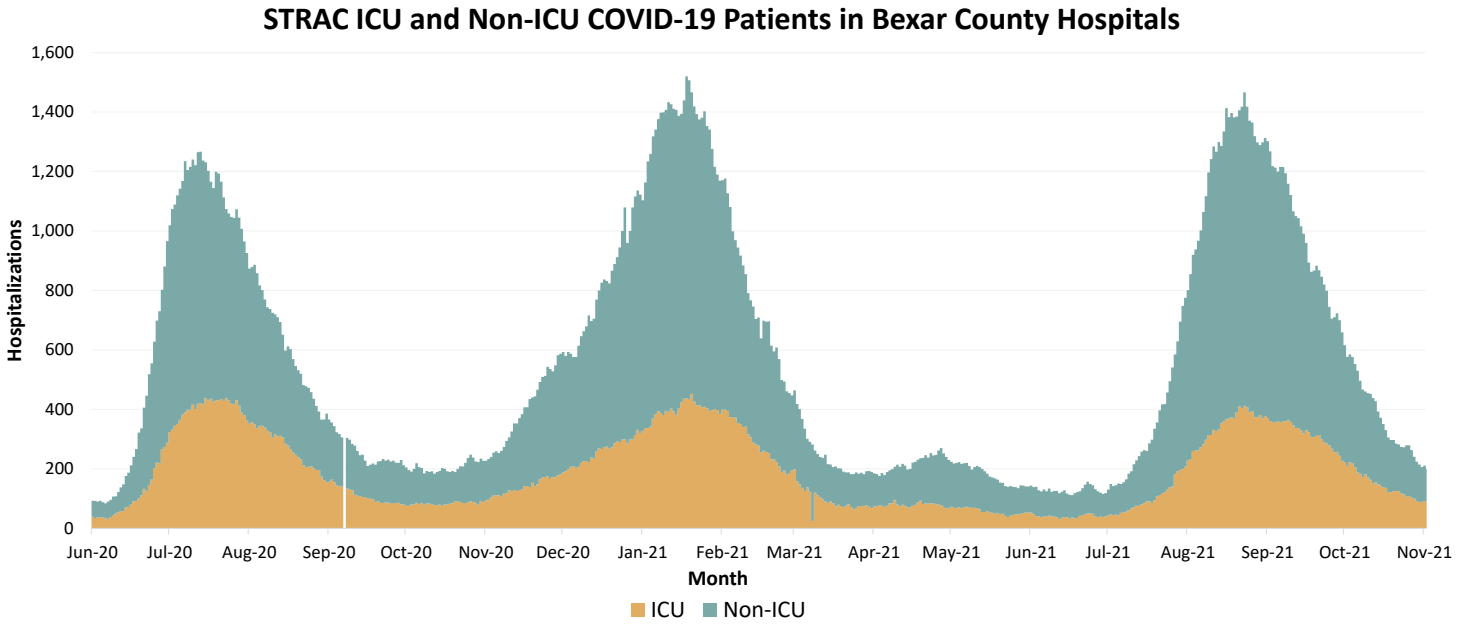
In October, COVID+ occupancy (coral) demonstrated a significant decrease to 211 beds per day, a 47% decrease from September 2021 (400 beds per day)**.** Available (unoccupied) staffed beds (**teal**) made up about 16% of total staffed beds at the end of October. Non-COVID+ occupancy (**navy)** increased by 2% to an average of 3,221 beds per day in October.



*Data was not reported on 9/7/2020 due to Labor Day

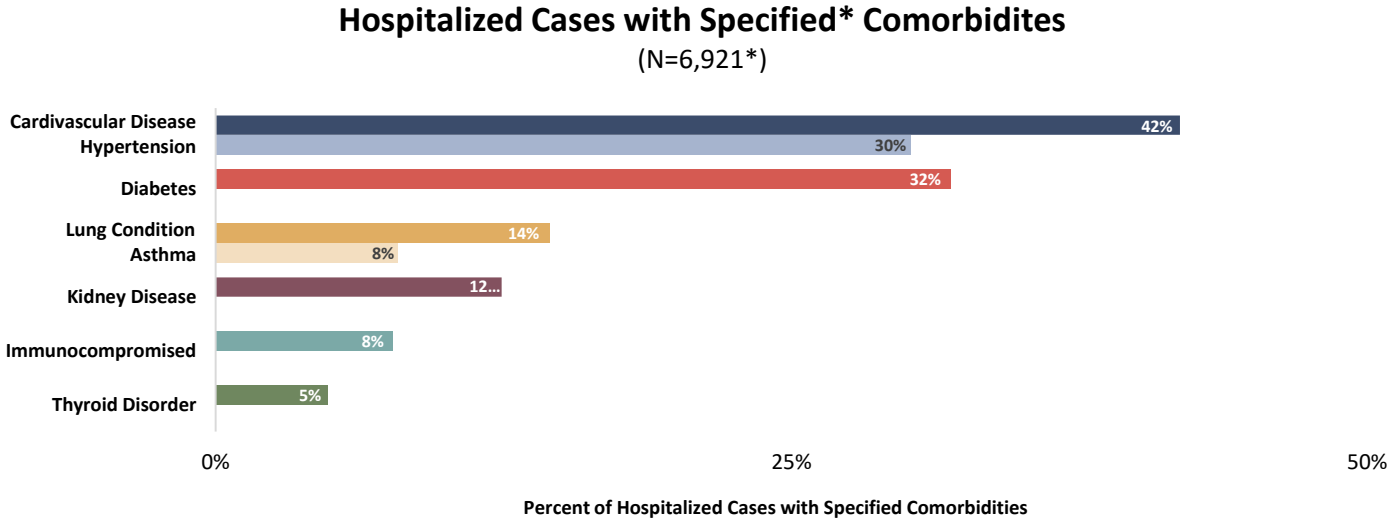
Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 11/12/2021.
Note: General and specialty hospitals in Bexar county designated by the Southwest Texas Regional Advisory Council as part of the local trauma/emergency healthcare system. Includes hospitals in the Baptist, Christus, Methodist, SW General, University, BAMC and VAMC systems treating COVID+ patients.

The number of cases in the ICU decreased to 89 at the end of October 2021. ICU cases dropped below 100 patients in the middle of September for the first time since mid-July 2021. In October, the average percentage of COVID+ patients admitted to the ICU accounted **for about 40% of overall hospitalizations.**



*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 11/12/2021

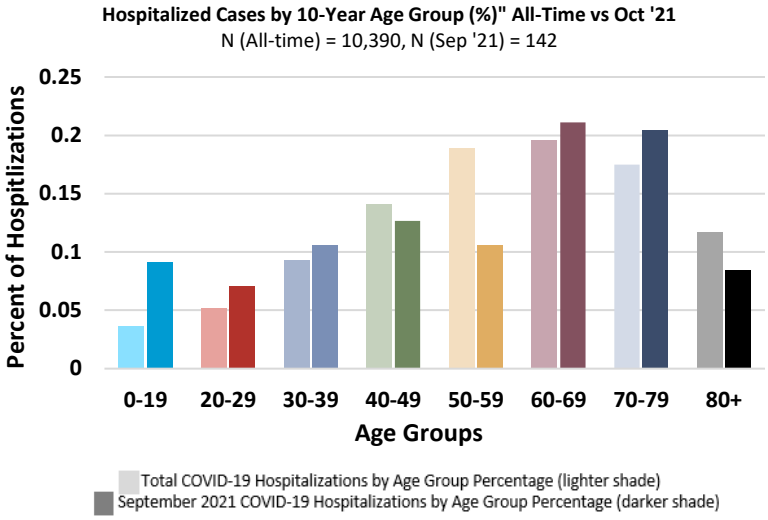


Data including the presence of at least one of the specified comorbidities associated with poor COVID-19 outcomes were available for 66% of the hospitalized cases (N=6,921). **Among these cases with at least one comorbidity, cardiovascular disease** (42%) **was the most prevalent** (30% specifically reported hypertension), **followed by diabetes** (32%).

Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease" and shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition" and shown separately.

*Excludes 3,495 (34%) hospitalized cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcome, or for whom such comorbidity data were not available.

V. B. Hospitalization and Age

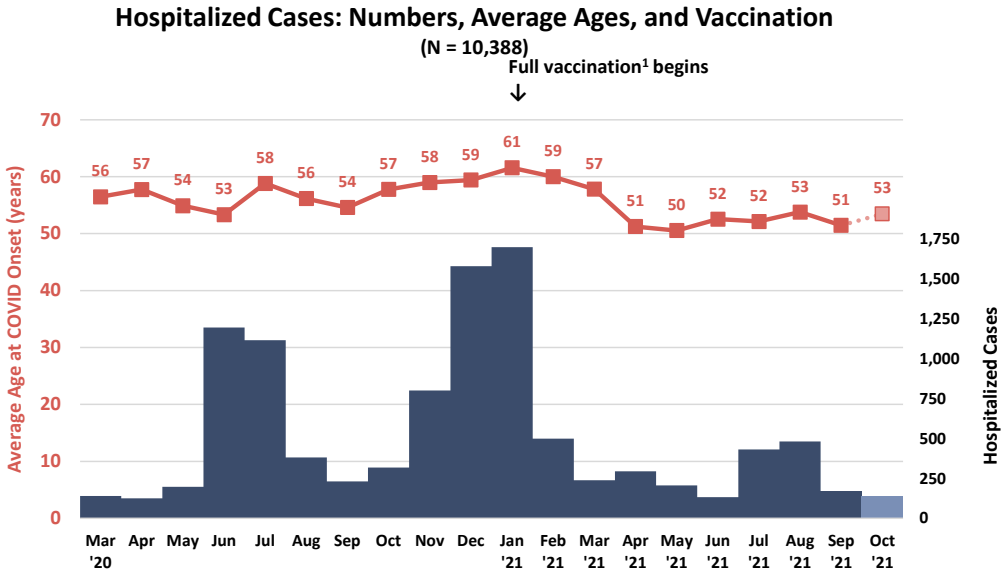


To date, 10,390 individuals (3% of all cases) have been hospitalized due to COVID-19, including 142 new hospitalizations in October 2021.

The 60-69 and 70-79 age groups contributed the largest percentages of all hospitalized cases in October. The 0-19 age group has accounted for 4% of hospitalizations over the entire pandemic — approximately 9% during the month of October.

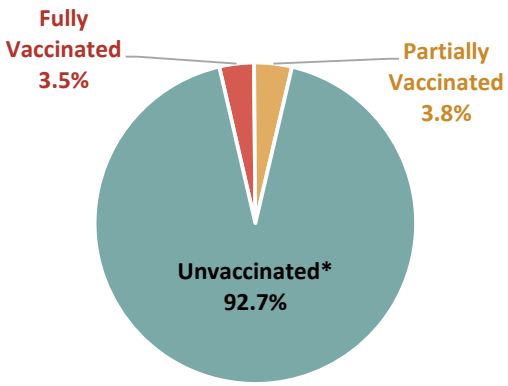
In October, hospitalizations increased for ages 0-19, 40-49, 60-69, and 70-79, but declined among the other age groups when compared to all COVID-19 hospitalizations throughout the month.

The **average age of hospitalized cases has declined from 61 years in Jan '21, to 51 years** in April '21 and has remained in the 50-53 age range since then. The decline in average age coincides with the availability of vaccination in older ages.



Note:
The dotted line indicates that October '21 data may be incomplete at time of analysis.

COVID-19 Related Hospitalized Cases by Vaccination Status, since Jan 01, 2021 (N=4,299)



Of the 4,299 COVID-19 related hospitalized cases with Event Date from January 1st 2021 through the end of October 2021, **279 (7.3%) had received some vaccination[1,2]**: 150 (3.5%) were fully vaccinated (breakthrough cases) and 163 (3.8%) were partially vaccinated.

Notes:
*Vaccination data were not available for 4% of known hospitalized cases at time of analysis, particularly for cases occurring during October.
[1] A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.
[2] Event date is the date of first positive test, or symptom onset (if available). This is not the date of hospitalization.
[3] Analyses of vaccination data are based upon data available from COVID-19 Case Investigation System database at the time of analysis.

V. C. Deaths

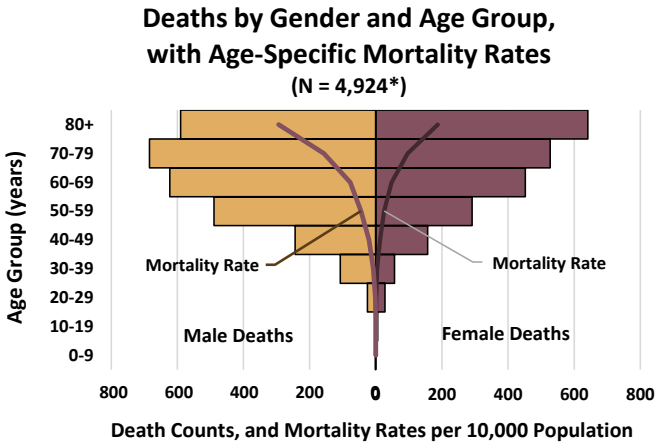
To date, a total of 4,963 Bexar County residents are known to have died due to COVID-19. Although more COVID-19 cases have occurred among women, **males continue to account for more than half of all deaths** of known gender (56%). As the top pyramid graph shows, deaths due to COVID-19 have occurred primarily among older cases.

Age-specific mortality rates† (curved lines on top graph) show that **males have higher rates of death (per 10,000 population) compared to females** in age groups 30-39 years and older — a persisting pattern throughout the pandemic.

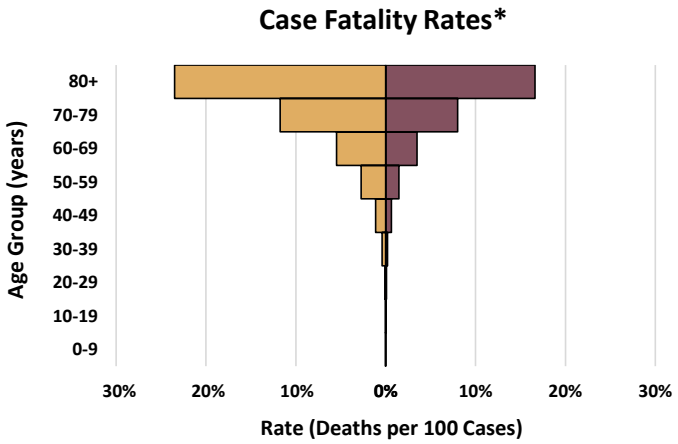
The COVID-19 case fatality rate (risk of death among cases), as shown in bottom pyramid graph, increases markedly with age, particularly for male cases. Among persons 80+ years of age who have COVID-19, the risk of death is 23% for males, and 17% for females. Overall, **1.5% of all known COVID-19 cases have died due to this disease** (1.8% of male and 1.3% of female cases).

Whereas the average age at COVID-19 onset is 35.9 years, average age of deceased cases is 68.1 years (age 66.6 for males, 69.9 for females). Although persons 70 years of age and older have accounted for only 6% of all cases, they have experienced 50% of all deaths.

Cumulative age-adjusted mortality rates‡ are now 341 deaths per 100,000 males, and 211 deaths per 100,000 females. The overall rate, including deceased persons for whom gender is not available (N=38), is **270 deaths per 100,000 population**.



*Excludes 39 cases (0.8%) for whom gender and/or age are unavailable.

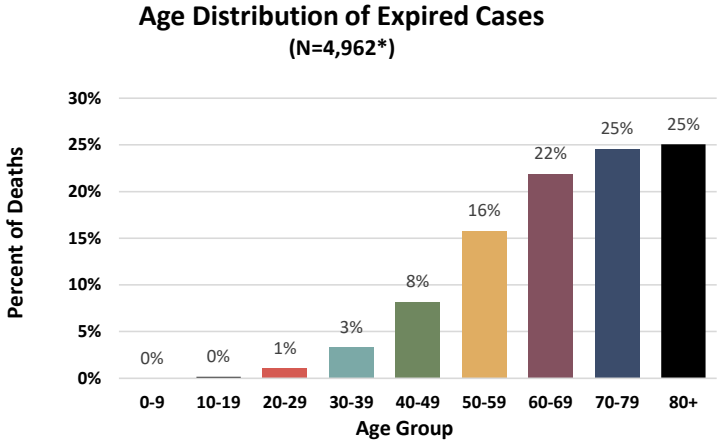


* N = 4,924 Deaths among 315,231 Cases. Excludes 39 Deaths (0.8%) and 7,723 Cases (2.4%) for whom gender and/or age are unavailable.

Full vaccination of older individuals began in the latter part of January '21. The **average age of deceased cases declined by 10 years** from January '21 (71.7 years) to August '21 (61.2 years) and remained between 61 and 63 years through September (October '21 data are incomplete). A modest increase in average age of deceased cases is expected as vaccination uptake improves among all adults.

†Age-specific rates use ACS 5-yr 2019 gender-specific population estimates for Bexar County.

‡Age-adjusted rates use the ACS 5-yr 2019 gender-specific population estimates for Bexar County and the US Standard Population 2000 weights.



* Excludes one death with age not available.

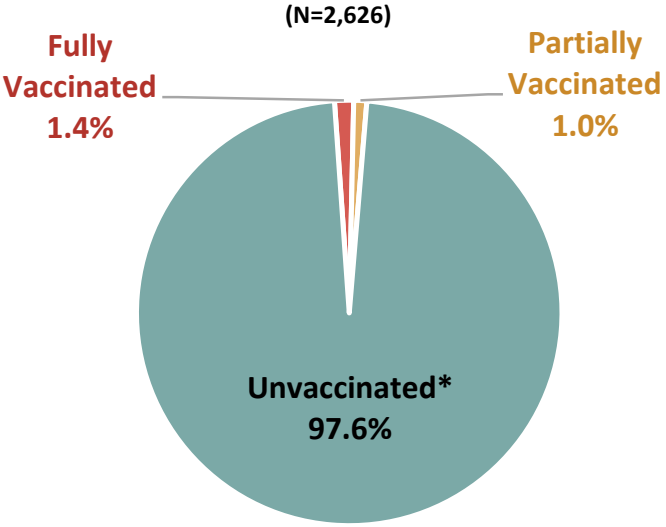
Half (50%) of all deaths due to COVID-19 have occurred to cases ages 70 years of age and older.

Deaths among children and young adults below age 30 years are rare, accounting for 1.2% of all deaths. To date, 62 cases in this age range have died due to COVID-19 (53 in age group 20-29).

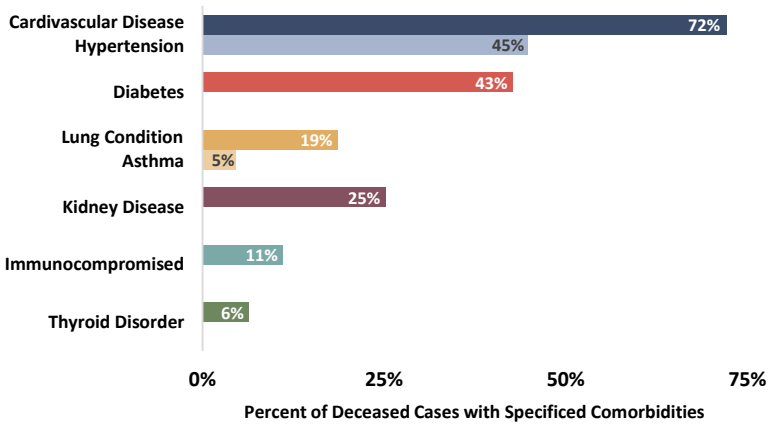
Of the 2,626 COVD-19 related deceased cases with Event Date from January 1st, 2021 through the end of October 2021, **at least 64 (2.4%) had received some vaccination**[1,2]: 38 (1.4%) were fully vaccinated, and 26 (1.0%) were partially vaccinated. The first breakthrough death occurred in a case with COVID-19 onset in April. Since then, an average of approximately 2.6% of deceased cases have been fully vaccinated, with no clear trend over time.

NOTES:
*Vaccination data were incomplete for 15% of known deceased cases at time of analysis.
[1] Analyses of vaccination data are based upon data available from COVID-19 Case Investigation System database at the time of analysis. These data are incomplete, especially for the more recent months.
[2] If the case received the single-dose Johnson and Johnson vaccine, they are considered fully vaccinated two weeks after that single dose. Cases receiving the Pfizer or Moderna vaccine are considered fully vaccinated two weeks after the second dose. Booster status is not included in these analyses.

COVID-19 Related Deceased Cases by Vaccination Status, since Jan 01, 2021
(N=2,626)



Deceased Cases with Specified* Comorbidities
(N=4,966*)

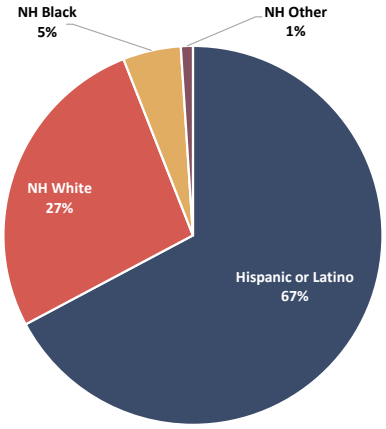


Data including the presence of at least one of the specified comorbidities associated with poor COVID -19 outcomes were available for 64% of deceased cases (N=4,966).

Among deceased cases with at least one comorbidity, cardiovascular disease (72%) was the most prevalent, followed by diabetes (43%).

Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease", and shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.
*Excludes 1,766 (36%) deceased cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcomes, or for whom data pertaining to these comorbid conditions.

Deaths by Race and Ethnicity
(N=4,384*)

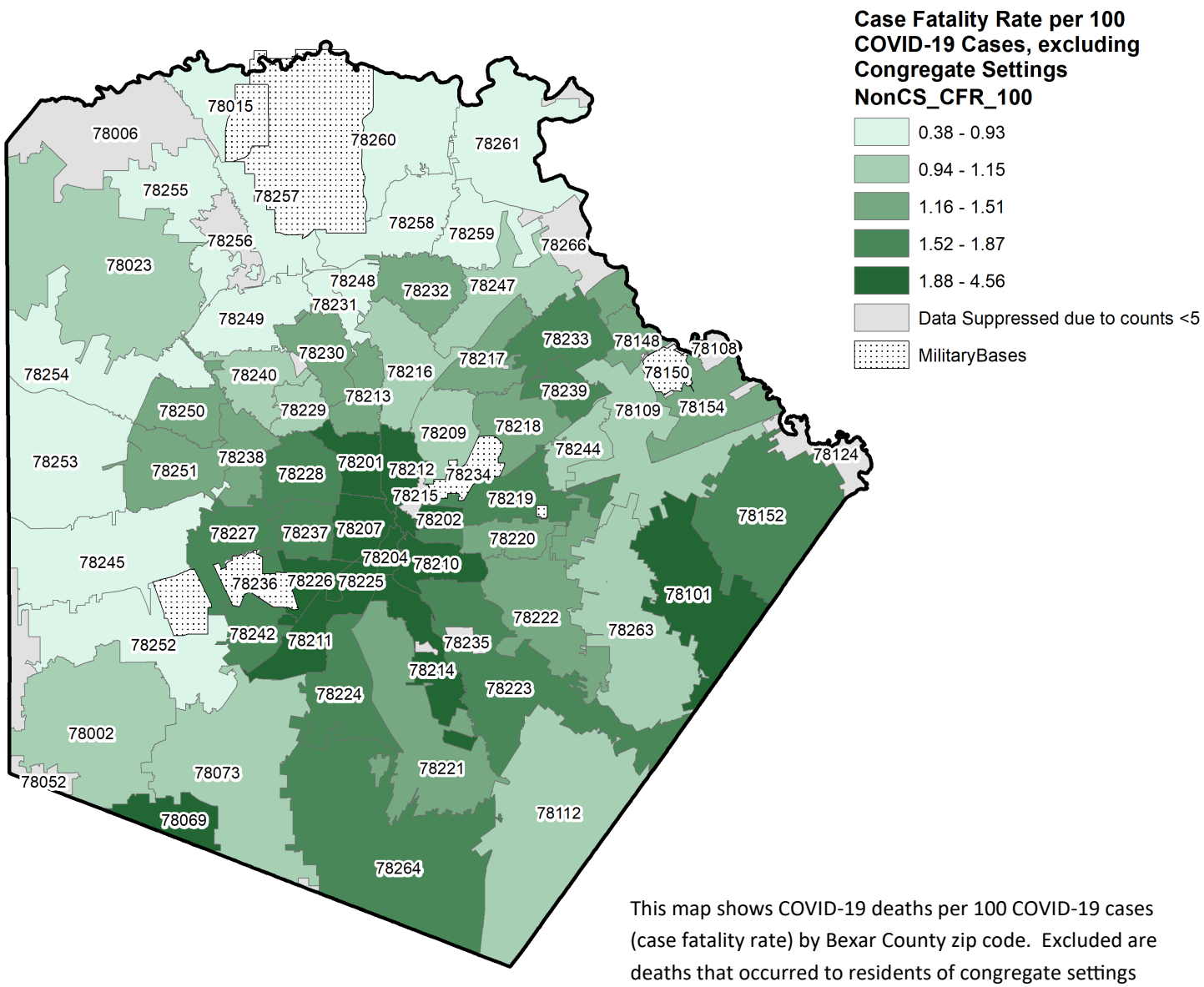


Of the COVID-19 related deaths with race/ethnicity data available, Hispanic or Latino individuals continue to account for 67% of the deaths, compared to 60% of the Bexar County population identifying as Hispanic or Latino †

Notes: Excludes 529 deceased cases (11%) for whom race and ethnicity data are not available.

COVID-19 Case Fatality Rate by Zip Code

(Excluding *Congregate Settings)



*A congregate setting is a setting in which a group of usually unrelated persons reside, meet, or gather either for a limited or extended period of time in close physical proximity.

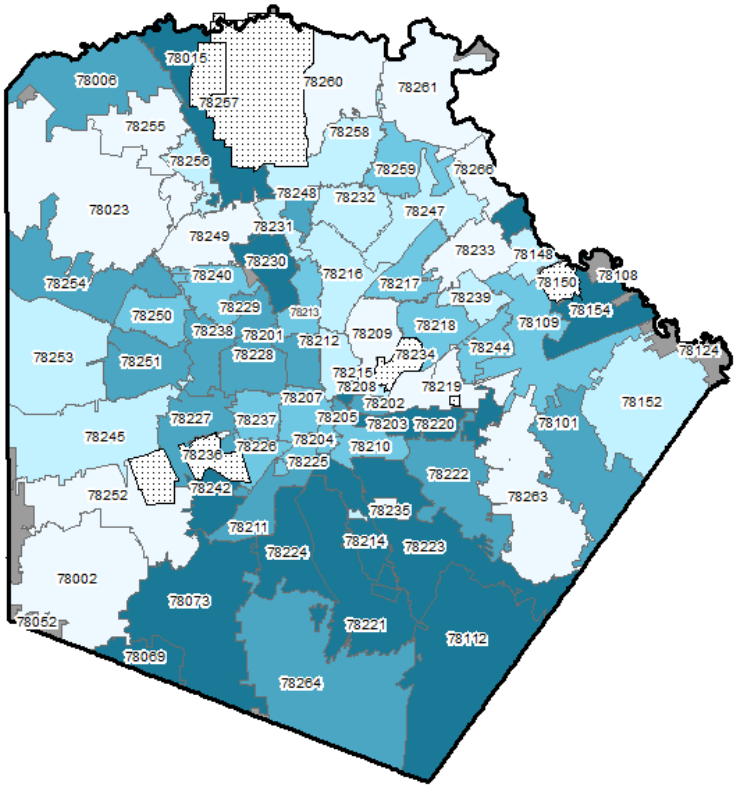
Source: SAMHD COVID-19 case data up to 11/14/2021, event dates through 10/31/2021

This map shows COVID-19 deaths per 100 COVID-19 cases (case fatality rate) by Bexar County zip code. Excluded are deaths that occurred to residents of congregate settings (defined here as nursing homes, assisted living facilities, jails, homeless shelters, rehabilitation facilities, and military barracks.

The highest case fatality rates continue to be found in zip codes closest to downtown, and in the extreme southeast and southwest of the county. The pattern of higher rates in the central and southern zip codes has remained consistent throughout the pandemic.

VI. Percent Change of COVID-19 Cases, September - October 2021

Percent Change in COVID-19 Cases from September '21 to October '21 by Zip Code

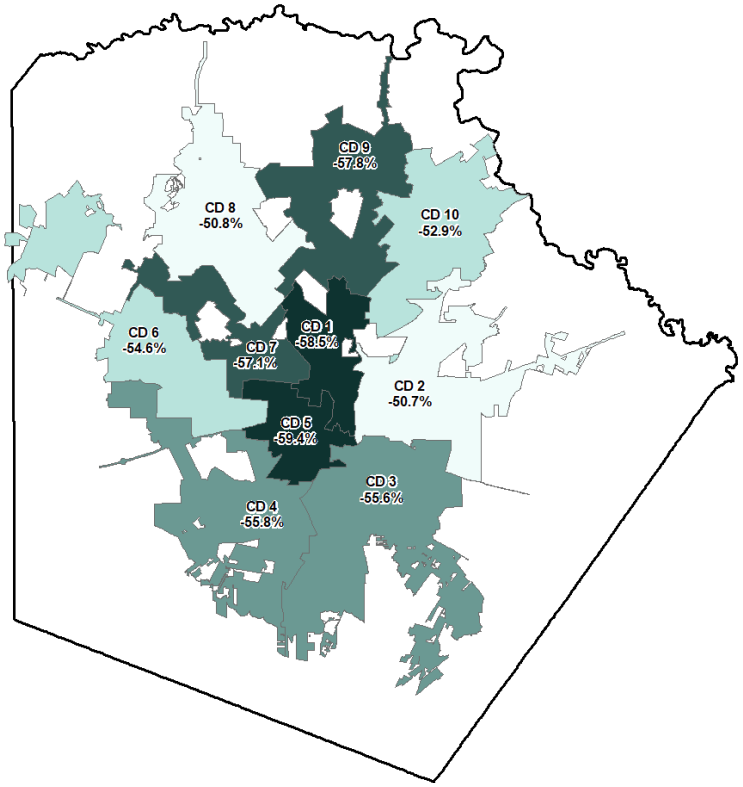


During the month of October 2021, majority of zip codes saw a significant percent decrease in new COVID-19 cases. Several zip codes in Bexar County saw percent decreases ranging from 67% to 92%. This drop in percent change reflects the continued decrease in COVID-19 infections seen through October 2021.

Percent Change in COVID-19 Cases from September 2021 to October 2021

- -92% - -86%
- -85% - -84%
- -83% - -82%
- -81% - -79%
- -78% - -67%
- Military Bases
- Data suppressed due to counts <5

Percent Change in COVID-19 Cases from September '21 to October '21 by Council District



The map to the left depicts the percent change in COVID-19 cases from September 2021 to October 2021 by City of San Antonio Council District. In comparison to September 2021, every council district continued to see a percent decrease in newly diagnosed COVID-19 cases, ranging from around 55% to over 70% in October 2021. Council Districts 3 and 4 both saw the largest decrease of approximately 72% and 68%, respectively, less COVID-19 cases in October than in September 2021. The City of San Antonio saw a 63% decrease in new COVID-19 cases in October 2021 compared to September 2021.

VII. Vaccinated and Unvaccinated COVID-19 Cases

The seven-day rolling incidence of fully vaccinated cases and not fully vaccinated cases decreased to 1.3 per 100,000 population and 6.5 per 100,000 population, respectively, by the end of October 2021. **This represented approximately a 24% decrease in fully vaccinated cases and a 70% decrease in not fully vaccinated cases** from the end of October 2021.